

© International Baccalaureate Organization 2022

All rights reserved. No part of this product may be reproduced in any form or by any electronic or mechanical means, including information storage and retrieval systems, without the prior written permission from the IB. Additionally, the license tied with this product prohibits use of any selected files or extracts from this product. Use by third parties, including but not limited to publishers, private teachers, tutoring or study services, preparatory schools, vendors operating curriculum mapping services or teacher resource digital platforms and app developers, whether fee-covered or not, is prohibited and is a criminal offense.

More information on how to request written permission in the form of a license can be obtained from <https://ibo.org/become-an-ib-school/ib-publishing/licensing/applying-for-a-license/>.

© Organisation du Baccalauréat International 2022

Tous droits réservés. Aucune partie de ce produit ne peut être reproduite sous quelque forme ni par quelque moyen que ce soit, électronique ou mécanique, y compris des systèmes de stockage et de récupération d'informations, sans l'autorisation écrite préalable de l'IB. De plus, la licence associée à ce produit interdit toute utilisation de tout fichier ou extrait sélectionné dans ce produit. L'utilisation par des tiers, y compris, sans toutefois s'y limiter, des éditeurs, des professeurs particuliers, des services de tutorat ou d'aide aux études, des établissements de préparation à l'enseignement supérieur, des fournisseurs de services de planification des programmes d'études, des gestionnaires de plateformes pédagogiques en ligne, et des développeurs d'applications, moyennant paiement ou non, est interdite et constitue une infraction pénale.

Pour plus d'informations sur la procédure à suivre pour obtenir une autorisation écrite sous la forme d'une licence, rendez-vous à l'adresse <https://ibo.org/become-an-ib-school/ib-publishing/licensing/applying-for-a-license/>.

© Organización del Bachillerato Internacional, 2022

Todos los derechos reservados. No se podrá reproducir ninguna parte de este producto de ninguna forma ni por ningún medio electrónico o mecánico, incluidos los sistemas de almacenamiento y recuperación de información, sin la previa autorización por escrito del IB. Además, la licencia vinculada a este producto prohíbe el uso de todo archivo o fragmento seleccionado de este producto. El uso por parte de terceros —lo que incluye, a título enunciativo, editoriales, profesores particulares, servicios de apoyo académico o ayuda para el estudio, colegios preparatorios, desarrolladores de aplicaciones y entidades que presten servicios de planificación curricular u ofrezcan recursos para docentes mediante plataformas digitales—, ya sea incluido en tasas o no, está prohibido y constituye un delito.

En este enlace encontrará más información sobre cómo solicitar una autorización por escrito en forma de licencia: <https://ibo.org/become-an-ib-school/ib-publishing/licensing/applying-for-a-license/>.

Business management
Standard level
Paper 2

Tuesday 25 October 2022 (morning)

1 hour 15 minutes

Instructions to candidates

- Do not open this examination paper until instructed to do so.
- A clean copy of the **business management formulae sheet** is required for this examination paper.
- Section A: answer one question.
- Section B: answer one question.
- A calculator is required for this examination paper.
- The maximum mark for this examination paper is **[30 marks]**.

Section A

Answer **one** question from this section.

1. Tipin (TI)

Tipin (TI) manufactures shirts using a batch production method.

Table 1 provides selected financial information for *TI* from:

- its profit and loss account for the year ending 31 May 2022
- its balance sheet at 31 December 2021.

Table 1: Selected financial information for *TI* (all figures in \$000s)

Cash	14
Cost of goods sold	700
Current liabilities	90
Debtors	80
Expenses	200
Gross profit	X
Interest	22
Net profit after interest and tax	58
Net profit before interest and tax	100
Net profit before tax	78
Retained profit	225
Sales revenue	1000
Stock	65
Tax	20

At the end of 2021, *TI*'s current ratio was 2.1. Its net profit margin declined from 14.8% in 2021 to 10.0% in 2022.

- (a) State **two** features of batch production. [2]
- (b) For the year ending 31 May 2022:
- (i) calculate *TI*'s gross profit (**X**) (*no working required*); [1]
- (ii) construct a fully labelled profit and loss account for *TI*. [3]
- (c) Calculate *TI*'s current ratio at 31 December 2022 (*show all your working*). [2]
- (d) Using your answer in part (c), comment on the relationship between the changes in *TI*'s current ratio from 2021 to 2022 and the changes in its net profit margin from 2021 to 2022. [2]

2. Florian Stones (FS)

Florian Stones (FS) sells handmade bracelets made from natural stones. *FS* enjoys strong brand awareness.

Table 2: Forecasted figures for *FS* for the year ending 31 December 2022

Fixed costs	\$15 000
Variable costs per bracelet	\$40
Price per bracelet	\$70
Number of bracelets produced	800

- (a) Define the term *brand awareness*. [2]
- (b) Using **Table 2**, draw a fully labelled break-even chart, to scale, for *FS* for 2022. [4]
- (c) Using **Table 2**, calculate:
 - (i) the profit or loss in 2022 for *FS* if production and sales increase to 1200 bracelets (*show all your working*); [2]
 - (ii) the price *FS* would need to charge per bracelet if it sells 800 bracelets and wants to make a profit of \$10 000. Assume that the costs remain the same (*show all your working*). [2]

Turn over

Section B

Answer **one** question from this section.

3. Tijeras (TJ)

Tijeras (TJ), a private limited company, manufactures surgical scissors. It has four shareholders and operates one factory in Peru. *TJ* sells in Central American and South American markets. Its sales have grown for the last 10 years, which has led to both economies of scale and diseconomies of scale.

The chief operating officer (COO) analysed the situation. He discovered that:

- current work areas are overcrowded
- workers are specializing more than in previous years
- maintenance costs are increasing
- the firm now buys raw materials in bulk.

The market for surgical equipment, including scissors, in the United States (US) is large and highly competitive. Recently, some hospitals in the US purchased *TJ*'s scissors.

Table 3: Selected financial information for *TJ* on 31 May 2021 and 2022 and for the years ending 31 May 2021 and 2022

	2021	2022	Industry average
Current ratio	1.4	1.2	1.5
Total cash	\$400 000	\$300 000	Not applicable
Sales revenue	\$7 500 000	\$8 000 000	Not applicable
Net profit margin	5.00 %	4.40 %	6.00 %

The COO determined that *TJ* needed more manufacturing capacity and put forward two options:

- **Option 1:** Keep the current factory in Peru and build a second one in Mexico, closer to the North American market. *TJ*'s bank has agreed to provide a long-term loan to finance the new factory.
- **Option 2:** Build a new factory that is large enough for all of *TJ*'s manufacturing-capacity needs and sell the old factory for \$400 000. This new factory cannot be financed solely with external borrowing.

Table 4: Forecasted costs of Option 1 and Option 2

	Option 1	Option 2
Cost of land, construction, and equipment	\$800 000	\$2 200 000

- (a) State **two** features of a private limited company. [2]
- (b) With reference to *TJ*, explain **one** economy of scale **and one** diseconomy of scale. [4]
- (c) With reference to *TJ*, explain the relationship between investment, profit and cash flow. [4]
- (d) Recommend whether *TJ* should choose **Option 1** or **Option 2**. [10]

4. Stuart Sporting Goods Ltd. (SSG)

Stuart Sporting Goods Ltd. (SSG) is a private limited company in Uisge, Scotland. The Stuart family has owned the store since 1937. SSG sells sporting equipment and clothes. It has strong brand awareness and loyalty based on excellent customer service. In 2021, the company had GBP 2.5 million in assets and GBP 2.1 million in equity.

Uisge is near Glasgow, Scotland’s largest city. Young families from Glasgow are moving to Uisge, where housing is cheaper and the pace of life is slower. These new residents’ employers, usually in Glasgow, allow them to telework two days per week. Uisge’s population has grown only slightly, as these new residents are largely replacing an ageing population.

Recently, *MuraMerk (MM)*, a retailer, opened a superstore in Uisge, *MM*’s first in Scotland. This superstore sells groceries, clothing, hardware, electronics and sporting equipment. *MM* also sells online. Because of the economies of scale, *MM* offers lower prices and more choices than other businesses in Uisge, including SSG. For several years before *MM*’s arrival, SSG’s sales revenue did not grow and, after *MM* arrived, sales revenue started to decline.

Aware of *MM*’s impact on small businesses in the United States (US), Douglas Stuart, who is 59 years old and the Chief Executive Officer (CEO) of SSG, is considering two options:

- **Option 1:** Lower prices, reduce employee levels, and cut costs in the hope that *MM* will be unsuccessful in Scotland (as it has been in several other countries).
- **Option 2:** Accept a takeover offer of GBP 1.1 million from a large chain of sporting goods.

- (a) Define the term *equity*. [2]
- (b) With reference to the new residents of Uisge, explain **one** advantage for employees of teleworking. [2]
- (c) Explain **three** possible reasons for the decline of sales at SSG. [6]
- (d) Evaluate the two options that Douglas is considering (**Option 1** and **Option 2**). [10]

5. Musical Musings (MM)

Musical Musings (MM) manufactures musical keyboards, using batch production to produce a limited range.

MM's products are designed for use in schools and homes. *MM* sells directly to schools, and, for the home market, sells through shops specializing in technology. *MM*'s costs are kept low by:

- limiting its product range
- focusing on a small target market, which enables *MM* to limit the features on its keyboards and keep the appearance functional.



MM provides free online "Teach yourself to play the keyboard" training courses for all customers.

In 2021, *MM* employed an average of 50 people. During that year, however, 12 people left the company. Their reasons for leaving are shown in **Table 5**.

Table 5: Stated reasons for employees leaving *MM* in 2021

Stated reason	Number of employees leaving <i>MM</i>
Retirement	1
Offered a more interesting job	5
Higher pay at a competitor	3
Lack of promotion opportunities	2
Family reasons	1

MM's labour turnover rate for 2021 was 24%. The manufacturing industry average was 15%.

In 2021, *MM*'s sales declined. *MM* is now considering targeting the niche market of professional musicians. *MM* would change its product design by adding a range of different sound features and improving the appearance of its keyboards. To achieve this change, *MM* would eventually stop supplying its existing market. Professional musicians would pay a higher negotiated price for improved keyboards made to their individual specifications. Changing its production process to job/customized production would be expensive for *MM*, however, and it would have to invest in a new marketing strategy.

- (a) State **two** characteristics of a niche market. [2]
- (b) Explain **two** methods that *MM* could use to reduce its labour turnover. [4]
- (c) Explain **two** ways in which *MM*'s profits could be affected by changing from batch production to job/customized production. [4]
- (d) Discuss the impact on *MM*'s marketing mix if *MM* changes its target market to professional musicians. [10]

Disclaimer:

Content used in IB assessments is taken from authentic, third-party sources. The views expressed within them belong to their individual authors and/or publishers and do not necessarily reflect the views of the IB.

References:

5. **(image)** Chang, Y. Y., 2021. [*musical keyboard*]. [image online] Available at: <https://unsplash.com/photos/VnEIGgL6c-k> [Accessed 2 December 2021].

All other texts, graphics and illustrations © International Baccalaureate Organization 2022